Night Shadow

NIGHT VISION BI-OCULAR

NIGHT SHADOW USER'S GUIDE (REV. 3, JUNE 2010)

u s e r `s g u i d e

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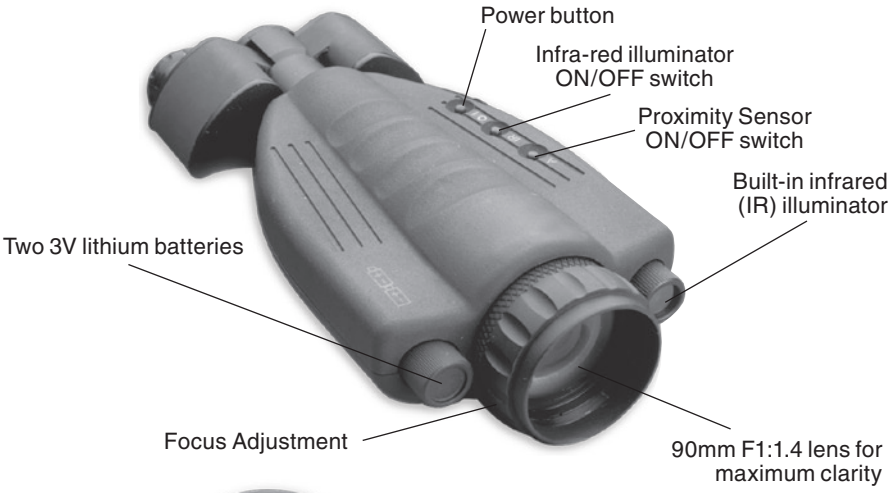
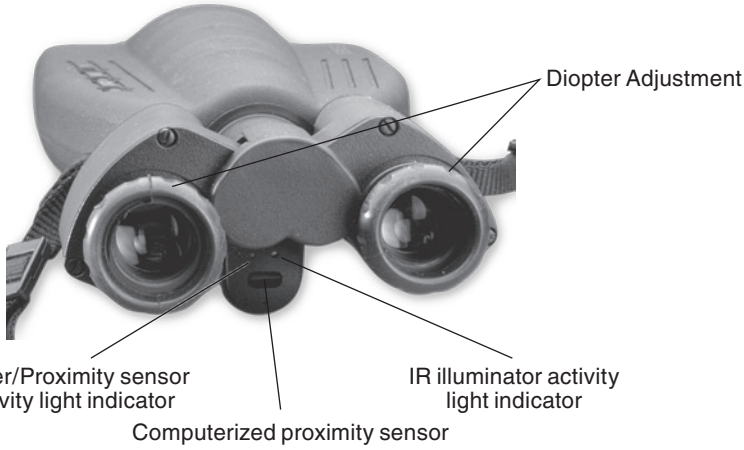
AMERICAN TECHNOLOGIES NETWORK CORP.

Register your product warranty online at www.atncorp.com/warranty





OPTIONAL ACCESSORIES

CAMERA-ADAPTER CA01 **Item #ACMUCA01**	DOUBLER DBL 3 **Item # ACMUDBLR03**	INFRA-RED ILLUMINATOR IR450-B2 **Item # ACMUIR45B2**

CAUTION:

THIS PRODUCT CONTAINS NATURAL RUBBER LATEX WHICH MAY CAUSE ALLERGIC REACTIONS.

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FEATURES

- Great for hunting, camping, boating or surveillance
- Available IITs: 1+, 2+, CGT, HPT, WPT, 3, 3A, 3P and G4
- Superb 3X or 5X lens system
- Total darkness technology
- Automatic brightness control
- Built-in IR illuminator
- Manual focus
- Diopter adjustable eyepiece
- Rugged and versatile design
- Light weight and comfortable
- Water and dust resistant
- Smart Technology
- Soft case
- Camera Adaptability
- Two-year warranty

SPECIFICATIONS

Magnification	3x (6x with Doubler) - 1st Gen.+; 5x (10x with Doubler) - 2+, CGT, HPT, WPT, 3, 3A, 3P and G4
Intensifier Tube	1+, 2+, CGT, HPT, WPT, 3, 3A, 3P and G4
Lens System	6 elements; F1:1.4, 90 mm
Field of View	14° - 1st Gen. 9° - 2+, CGT, HPT, WPT, 3, 3A, 3P and G4
Range of Focus	2,5 m (8') to infinity
Power Supply	two 3-volt lithium batteries (CR132A Type)
Battery Life	60 hours (Gen.2+, CGT); 50 hours (HPT, WPT, 3, 3A, 3P and G4)
Operating Temperature	-40°C to +50°C
Storage Temperature	-50°C to +70°C
Dimensions	255 x 122 x 78 mm (10"x 5"x 2")
Weight	1,2 kg (2.5 lbs.)

* ATN reserves the right to change the above specifications at any time without notice

APPLICATION

The night vision bioculars are a complex opticoelectronic system for individual use. The device consists of the objective lens, eyepiece and body. The body contains an intensifier tube assembly with an integrated high voltage power source and two three-volt battery housing. When installing the batteries one should keep in mind that the polarity of the batteries must coincide with the diagram on the body next to the battery housing cap.

The objective lens protective cover is designed to protect the objective lens from dust and scratches. It also acts as a daylight filter allowing you to test the bioculars in the daylight or other bright light situations. The pinhole in the center of the protective cover allows the user to check the operation ability of the device under the daylight conditions.

The scope is equipped with the Automatic Shut-off System. This system tracks when the scope is not used (the controls are not touched for 60 minutes continuous) and shuts the unit off automatically.

NOTE: *Do not test the scope under the daylight conditions even with the daylight filter/lens cap on for more than ten (10) minutes.*

SMART DIGITAL TECHNOLOGY

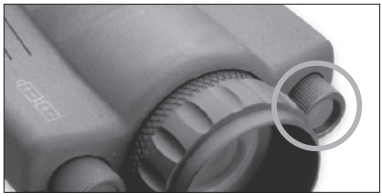
Smart Total Darkness Technology finally provides the user total control in the hi-tech industry of night vision. The Smart Series night vision devices have been designed with the latest computer technology. Computer system on board identify the user's intention to look through the oculars. When the oculars is brought to the user's eyes, the bioculars will automatically turn on. When removed from the eyes the device will turn off (for this feature you have to engage the proximity sensor to its work mode). The user will never have to worry about turning the bioculars on or off. Smart series bioculars automatically "sense" when they're no longer being used, and will shut off and go to sleep mode. All the controls and buttons are digital. Even if your batteries are low, don't worry the smart series will let you know about that.

To use the smart sensor of the Night Shadow and save the life of the scope as well as batteries, press both the "SL" and the "+" buttons. After that the Voyager turns off when you move away from the scope. It will turn back on when you move back to the scope.

1. Power indicator light - when power is ON, the LED will be green.
2. When the proximity sensor is activated the LED changes to red.
3. When IR is ON the LED is orange.

NOTE: *You may notice the persistent green glow for up to five (5) minutes after you have turned the unit off. This is normal for the 1st Gen. light intensifier tube.*

INFRA-RED ILLUMINATOR



The infra-red illuminators, or IR illuminators, are common to night vision. The IR light greatly enhances the performance of the Night Shadow while remaining almost invisible to a naked eye. Night Shadow has its own IR illuminator incorporated to the device body.

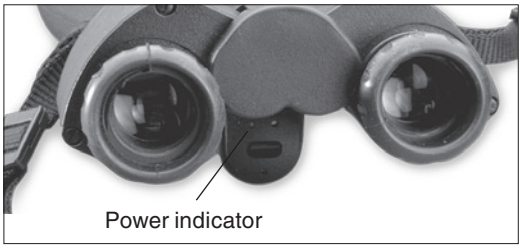
To turn the IR on push the IR button and you will see the orange indicator light come on. It is important to remember that the IR illuminator is simply an infra-red light source, and like any light source it may loose its effectiveness over a great distance.

Remember: If you twist and pull the IR you will increase its distance of effectiveness while decreasing the angle and vice versa.

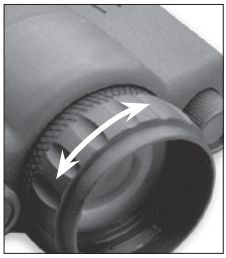
NOTE: *The IR will automatically turn off when the unit's main power is turned off.*

LOW BATTERY INDICATOR

The low battery indicator is another feature that is programmed into your "Smart" bioculars. If the batteries begin to lose its charge the Power LED starts to pulse indicating that you have to replace the batteries with new one.



FOCUSING



NOTE: *The Night Shadow inter-ocular distance could be adjusted manually.*

To focus the Night Shadow you will need to adjust the diopter first. Simply turn the diopter clockwise until it stops. Then, while looking to an object, slowly turn the diopter back counter-clockwise until the grain on the image becomes sharp.

NOTE: *We suggest that you focus the diopter in daytime with the daylight filters on.*

Next, focus the front lens until the image and the grain are both sharp. When you are in low-light conditions and the daylight filter is off you may focus the front lens to obtain sharp image while the diopter should not be adjusted.

NOTE: *The front lens should be readjusted as you view objects at different distances.*

USING THE CAMERA ADAPTER (OPTIONAL)

To use your Night Shadow with a 35-mm camera or camcorder you will need the following:

1) If you plan to use a camcorder then camcorder must have a MACRO feature. Most modern camcorders today have a MACRO feature built in.

2) If you plan to use a 35-mm camera you will need a MACRO lens. If you don't have one we advise you to contact your local camera store.

3) You may or may not need a STEP-UP or STEP-DOWN ring in order to adapt the camera adapter to your lens.

NOTE: *The camera adapter comes with 37-mm and 52-mm threads. If you need other sizes your local camera store should be able to help.*

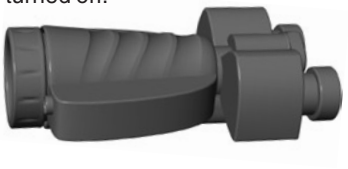
- Remove the rubber eyecup from the Night Shadow
- Screw the camera adapter onto the front of the lens on your Video camera lens or your 35-mm camera lens.
- Loosen the three set screws on the camera adapter.
- Place the camera adapter over the Night Shadow eyepiece.
- Tighten the three set screws to fit snugly to the Night Shadow eyepiece
- You may need to focus the 35-mm camera or video camera in combination with the Night Shadow in order to get the sharpest image possible.
- We suggest that you find an open space to work in. Focus the init so that the scene is at its sharpest. For the best results you should disable the auto focus (if any) on either the 35-mm camera or the video camera and manually focus the 35-mm camera or the video camera. Once the image is in sharp simply adjust the Night Shadow front lens to change focus.

**An important part to remember is that you are not taking a picture of the object that is far away from you, but you are actually taking a picture of the phosphorous screen of the Night Shadow that is only 2-3 inches away.*

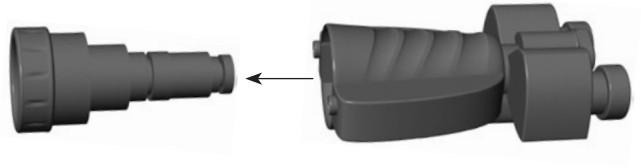
USING THE DOUBLER (OPTIONAL)

NOTE: *When attaching the doubler do not be afraid to use a little force.*

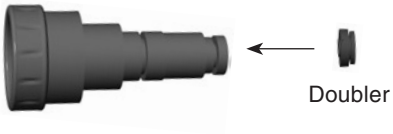
• Make sure that the unit is turned off.



• Unscrew 90mm lens from the body of the Night Shadow

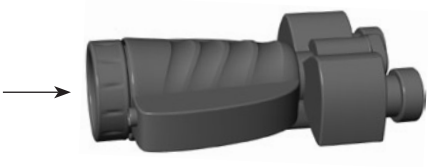


• Screw the doubler onto the back of the lens.



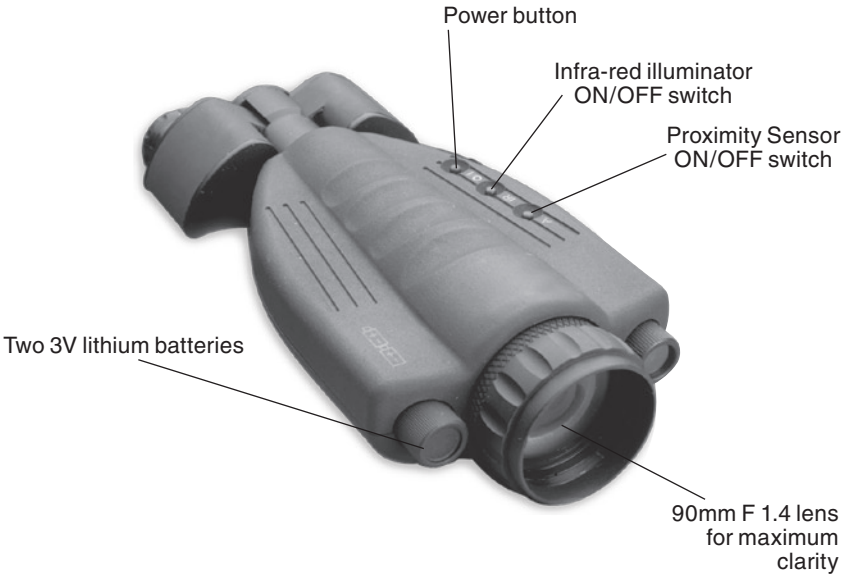
• Tighten the screw on the Doubler's side (screw-driver is provided).

• Screw the lens with the Doubler back into the main body.



OPERATION

- Take the bioculars out of the case.
- Install the batteries into the housing with the polarity order as shown on the bioculars. Battery Type: 3-Volt Lithium, 2 x CR123A.
- Press the button marked O\I to turn the unit on with the protective lens covers still attached to the lenses. Do not turn the unit on in the daytime without the protective lens caps on. You should see a green glow in the eyepiece.
- Observe the scene and adjust the diopter for the optimal image clarity.
- You may now enter the dark environment or simply shut the lights off in order to darken the room.
- Next, remove the lens caps/daylight filters and observe the scene. You should readjust the front lens focusing for maximum clarity. Remember, the focus range of the bioculars is 20' to infinity.
- The unit will turn on and off automatically when you bring it to or take away from your eyes. This is happened owing to proximity sensor. To activate the proximity sensor push the digital control marked "A". You will notice the green LED changes to red when the sensor is on.
- In order to assure the proper functioning of the proximity sensor make sure that the protective glass surface of the sensor is always clean.
- Adjust the digital features as needed.
- Take your time to learn about your "smart " bioculars. It will take some practice to use the device certainly, for example, to improve speed of focusing.


Power button
Infra-red illuminator ON/OFF switch
Proximity Sensor ON/OFF switch
Two 3V lithium batteries
90mm F 1.4 lens for maximum clarity

CLEANING THE EYEPIECE

You may need to clean the eyepiece of the Night Shadow from time to time in order to guarantee top performance. When you receive your Night Shadow you should check for dust on the eyepiece of the unit.

First you will need to remove the eyepiece. Unscrew the eyepiece counter-clockwise to remove it.

CAUTION: *Use only photographic lens cleaning tissue on these surfaces. Be careful not to scratch or smudge any of them. When using compressed air to blow the dust away make sure to avoid inverting the can while spraying. This might cause the frozen propellant to exit the can and cause serious problems with the glass and phosphor screens.*

WARNINGS AND CAUTIONS

- Always remember to turn off the Night Shadow when it is not in use. If you do not plan on using your device for a period of more than 10 days, you should remove the batteries.
- **Keep lens cap/daylight filter on when not in use.**
- Avoid contact with dust, steam, and gas.
- The Night Shadow is not harmful to the user or the environment.
- Do not disassemble except to clean the front lens and the eyepiece: **it will void your warranty.**
- Evaluate the scopes function by looking through it in a lit environment with the daylight filter lens cap on. Never use in daylight without the daylight filter lens cap on. Do not surpass ten minutes of testing.
- **Never point the Night Shadow at a bright light source.** If the scope shuts off automatically after directing it at a bright light source, turn the unit off and wait 1 - 2 minutes before turning the unit back on.
- Adverse atmospheric conditions such as fog, smog, or haze and a lack of ambient light (moon or starlight) may diminish the effective viewing distance. All technical data for this unit was compiled in a controlled environment.
- If you use the rubber eyecaps for a long period of time, you may suffer skin inflammation. If you develop any symptoms, consult a doctor immediately.

TROUBLESHOOTING

Q: Flashes, flickers, or clicking occur while operating

S: If it occurs within the first five minutes of inserting new batteries it is normal and the device will resume normal operation soon thereafter. If it occurs after 10 minutes contact to your dealer or other authorized representative for service instructions.

Q: Dark spots on screen.

S: These are either cosmetic blemishes in the intensifier tube or dust particles. The dust particles can be cleaned following instructions in the “Cleaning Eyepiece” section.

Q: Screen becomes darker than at previous use.

S: Replace batteries. If the problem persists contact your dealer or other authorized service representative for service instructions.

Q: Image not clear.

S: Adjust objective lens and/or the eyepiece. Turn on the IR.

2 YEAR PRODUCT WARRANTY

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of 2 (two) years from the date of purchase. In the event a defect that is covered by the foregoing warranty occurs during the applicable period stated above, ATN, at its option, will either repair or replace the product, and such action on the part of ATN shall be the full extent of ATN's liability, and the Customer's sole and exclusive remedy. This warranty does not cover a product (a) used in other than its normal and customary manner; (b) subjected to misuse; (c) subjected to alterations, modifications or repairs by the Customer of by any party other than ATN without prior written consent of ATN; (d) special order or "close-out" merchandise or merchandise sold "as-is" by either ATN or the ATN dealer; or (e) merchandise that has been discontinued by the manufacturer and either parts or replacement units are not available due to reasons beyond the control of ATN. ATN shall not be responsible for any defects or damage that in ATN's opinion is a result from the mishandling, abuse, misuse, improper storage or improper operation, including use in conjunction with equipment which is electrically or mechanically incompatible with or of inferior quality to the product, as well as failure to maintain the environmental conditions specified by the manufacturer. **CUSTOMER IS HEREBY NOTIFIED THAT OPERATION OF THE EQUIPMENT DURING DAYLIGHT HOURS OR UNDER ANY EXCESSIVE LIGHT CONDITIONS MAY PERMANENTLY DAMAGE THE INTERNAL COMPONENTS OF THE UNIT AND SAID DAMAGE WILL NOT BE COVERED UNDER THIS WARRANTY.** This warranty is extended only to the original purchaser. Any breach of this warranty shall be waived unless the customer notifies ATN at the address noted below within the applicable warranty period.

The customer understands and agrees that except for the foregoing warranty, no other warranties written or oral, statutory, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, shall apply to the product. All such implied warranties are hereby and expressly disclaimed.

LIMITATION OF LIABILITY

ATN will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities arising out of the use of this product. Operation and use of the product are the sole responsibility of the Customer. ATN's sole undertaking is limited to providing the products and services outlined herein in accordance with the terms and conditions of this Agreement. The provision of products sold and services performed by ATN to the Customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party of legal entity outside ATN and the Customer; ATN's obligations under this Agreement extend solely to the Customer. **ATN's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to ATN by the customer or customer's dealer. ATN shall not, in any event, be liable for special, indirect, incidental, or consequential damages, including, but not limited to, lost income, lost revenue, or lost profit, whether such damages were foreseeable or not at the time of purchase, and whether or not such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability.**

PRODUCT WARRANTY REGISTRATION

In order to validate the warranty on your product, ATN must receive a completed Product Warranty Registration Card for each unit or complete warranty registration on our website at www.atncorp.com. Please complete the included form and immediately mail it to our Service Center: ATN Corporation, 1341 San Mateo Avenue, South San Francisco, CA 94080.

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OBTAINING WARRANTY SERVICE

To obtain warranty service on your unit, End-user must notify ATN service department by calling **800-910-2862** or **650-989-5100** or via e-mail service@atncorp.com to receive a Return Merchandise Authorization number (RMA). When returning please take or send the product, postage paid, with a copy of your sales receipt to our service center, ATN Corporation at the address noted above. All merchandise must be fully insured with the correct postage; ATN will not be responsible for improper postage or, missing or damaged merchandise during shipment. When sending product back, please clearly mark the RMA# on the outside of the shipping box. Please include a letter that indicates your RMA#, Name, Return Address, reason for service return, Contact information such as valid telephone numbers and/or e-mail address and proof of purchases that will help us to establish the valid start date of the warranty. **Product merchandise returns that do not have an RMA listed may be refused or a significant delay in processing may occur.** Estimated Warranty service time is 10-20 business days. End-user/customer is responsible for postage to ATN for warranty service. ATN will cover return postage/shipping after warranty repair to end-user/customer only if product is covered by aforementioned warranty. ATN will return product after warranty service by domestic UPS ground and/or domestic mail. Any other requested, required or international shipping method the postage/shipping fee will be the responsibility of the end-user/customer.

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